Release notes for ENDF/B Development photoat-094_Pu_000 evaluation



October 13, 2016

- checkr Warnings:
 - 1. A previous error halted parsing of the current section $MAT=9400,\ MF=1,\ MT=451\ (1)$: Parsing stopped

ERROR(S) FOUND IN MAT=9400, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER 170 TO 209

- checkr Errors:
 - 1. A variable is outside the allowed ENDF range MAT=9400, MF=1, MT=451 (0): Variable range

ERROR(S) FOUND IN MAT=9400, MF= 1, MT=451
MOD = 3 OUT OF RANGE 0 - 1 RECORD NUMBER 170

2. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=501 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=501
SECTION 23/501 NOT IN DIRECTORY RECORD NUMBER

3. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=502 (0): Directory (b)

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ERROR(S) FOUND IN MAT=9400, MF=23, MT=502
SECTION 23/502 NOT IN DIRECTORY RECORD NUMBER 1228

4. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=504 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=504
SECTION 23/504 NOT IN DIRECTORY RECORD NUMBER 1704

5. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=515 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=515
SECTION 23/515 NOT IN DIRECTORY RECORD NUMBER 1745

6. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=516 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=516
SECTION 23/516 NOT IN DIRECTORY RECORD NUMBER 1780

7. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=517 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=517 SECTION 23/517 NOT IN DIRECTORY

RECORD NUMBER 1835

8. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 9400, MF = 23, MT = 522 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=522 SECTION 23/522 NOT IN DIRECTORY

RECORD NUMBER 1877

9. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=534 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=534 SECTION 23/534 NOT IN DIRECTORY

RECORD NUMBER 2354

10. Missing a section in directory so your directory is messed up. This error will break everything else $MAT=9400,\ MF=23,\ MT=535\ (0)$: Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=535 SECTION 23/535 NOT IN DIRECTORY

RECORD NUMBER 2373

11. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=536 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=536 SECTION 23/536 NOT IN DIRECTORY

RECORD NUMBER 2395

12. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=537 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=537 SECTION 23/537 NOT IN DIRECTORY

RECORD NUMBER 2416

13. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=538 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=538 SECTION 23/538 NOT IN DIRECTORY

RECORD NUMBER 2439

14. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=539 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=539 SECTION 23/539 NOT IN DIRECTORY

RECORD NUMBER 2464

15. Missing a section in directory so your directory is messed up. This error will break everything else $MAT=9400,\ MF=23,\ MT=540\ (0)$: Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=540 SECTION 23/540 NOT IN DIRECTORY

RECORD NUMBER 2490

16. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 9400, MF = 23, MT = 541 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=541 SECTION 23/541 NOT IN DIRECTORY

RECORD NUMBER 2517

17. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 9400, MF = 23, MT = 542 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=542 SECTION 23/542 NOT IN DIRECTORY

RECORD NUMBER 2545

18. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 9400, MF = 23, MT = 543 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=543 SECTION 23/543 NOT IN DIRECTORY

RECORD NUMBER 2574

19. Missing a section in directory so your directory is messed up. This error will break everything else $MAT=9400,\ MF=23,\ MT=544\ (0)$: Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=544 SECTION 23/544 NOT IN DIRECTORY

RECORD NUMBER 2600

20. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=545 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=545 SECTION 23/545 NOT IN DIRECTORY

RECORD NUMBER 2630

21. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=546 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=546 SECTION 23/546 NOT IN DIRECTORY

RECORD NUMBER 2660

22. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=547 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=547 SECTION 23/547 NOT IN DIRECTORY

RECORD NUMBER 2697

23. Missing a section in directory so your directory is messed up. This error will break everything else $MAT=9400,\ MF=23,\ MT=548\ (0)$: Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=548 SECTION 23/548 NOT IN DIRECTORY

RECORD NUMBER 2734

24. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 9400, MF = 23, MT = 549 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=549 SECTION 23/549 NOT IN DIRECTORY

RECORD NUMBER 2792

25. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 9400, MF = 23, MT = 550 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=550 SECTION 23/550 NOT IN DIRECTORY

RECORD NUMBER 2851

26. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 9400, MF = 23, MT = 551 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=551 SECTION 23/551 NOT IN DIRECTORY

RECORD NUMBER 2879

27. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=552 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=552 SECTION 23/552 NOT IN DIRECTORY

RECORD NUMBER 2917

28. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=553 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=553 SECTION 23/553 NOT IN DIRECTORY

RECORD NUMBER 2951

29. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=554 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=554 SECTION 23/554 NOT IN DIRECTORY

RECORD NUMBER 3007

30. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=555 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=555 SECTION 23/555 NOT IN DIRECTORY

RECORD NUMBER 3064

31. Missing a section in directory so your directory is messed up. This error will break everything else $MAT=9400,\ MF=23,\ MT=556\ (0)$: Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=556 SECTION 23/556 NOT IN DIRECTORY

RECORD NUMBER 3146

32. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 9400, MF = 23, MT = 559 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=559 SECTION 23/559 NOT IN DIRECTORY

RECORD NUMBER 3227

33. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 9400, MF = 23, MT = 560 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=560 SECTION 23/560 NOT IN DIRECTORY

RECORD NUMBER 3262

34. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=561 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=561

SECTION 23/561 NOT IN DIRECTORY

RECORD NUMBER 3302

35. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=23, MT=570 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=23, MT=570 SECTION 23/570 NOT IN DIRECTORY

RECORD NUMBER 3344

36. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=27, MT=502 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=27, MT=502 SECTION 27/502 NOT IN DIRECTORY

RECORD NUMBER 3382

37. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=27, MT=504 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=27, MT=504 SECTION 27/504 NOT IN DIRECTORY

RECORD NUMBER 3432

38. Missing a section in directory so your directory is messed up. This error will break everything else MAT=9400, MF=27, MT=505 (0): Directory (b)

ERROR(S) FOUND IN MAT=9400, MF=27, MT=505 SECTION 27/505 NOT IN DIRECTORY

RECORD NUMBER 3483

39. Missing a section in directory so your directory is messed up. This error will break everything else $MAT=9400,\ MF=27,\ MT=506\ (0)$: Directory (b)

• fudge-4.0 Warnings:

1. generic warning message reaction label 0: $Pu + gamma \ [coherent] \ / \ Product: gamma \ (Error \# 0): Warning$

WARNING: coherentScattering is not a valid distribution component for 2-body reaction

2. FIXME: Generic fudge unimplemented message reaction label 0: Pu + gamma [coherent] / Product: gamma (Error # 2): Generic unimp (c)

WARNING: Checking not yet implemented for pointwise type data

3. generic warning message reaction label 1: Pu + gamma [incoherent] / Product: gamma (Error # 0): Warning

WARNING: incoherentScattering is not a valid distribution component for 2-body reaction

4. FIXME: Generic fudge unimplemented message reaction label 1: Pu + gamma [incoherent] / Product: gamma (Error # 2): Generic unimp (c)

WARNING: Checking not yet implemented for piecewise type data

5. Cross sections do not correctly sum up properly according to an ENDF (or equivalent) sumrule summedReaction label 31: total (Error # 0): Sumrule

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 100.00%

6. Cross sections do not correctly sum up properly according to an ENDF (or equivalent) sumrule summedReaction label 33: photoelectric absorption (Error # 0): Sumrule

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 64.80%

• fudge-4.0 Errors:

1. Calculated and tabulated thresholds don't agree reaction label 0: Pu + gamma [coherent] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1. eV!

2. 2-body reaction not in center-of-mass frame reaction label 0: Pu + gamma [coherent] / Product: gamma (Error # 1): 2-body not in COM

WARNING: 2-body reaction not in center-of-mass frame!

3. Calculated and tabulated thresholds don't agree reaction label 1: Pu + gamma [incoherent] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1. eV!

4. 2-body reaction not in center-of-mass frame reaction label 1: Pu + gamma [incoherent] / Product: gamma (Error # 1): 2-body not in COM

WARNING: 2-body reaction not in center-of-mass frame!

5. Energy range of data set does not match cross section range reaction label 1: Pu + gamma [incoherent] / Product: gamma / Distribution incoherentScattering - piecewise: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (0.0 -> 1000000000.0) vs (1.0 -> 1e+11)

6. Calculated and tabulated thresholds don't agree reaction label 2: e- + e+ + Pu [electron field] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2.044e6 eV!

7. Calculated and tabulated thresholds don't agree reaction label 3: e- + e+ + Pu [nuclear field] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1.022e6 eV!

8. Calculated and tabulated thresholds don't agree reaction label 4: e- + Pu1s1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 122350. eV!

9. Calculated and tabulated thresholds don't agree reaction label 5: e- + Pu2s1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 23122. eV!

10. Calculated and tabulated thresholds don't agree reaction label 6: e- + Pu2p1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 22371. eV!

11. Calculated and tabulated thresholds don't agree reaction label 7: e- + Pu2p3/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 18071. eV!

12. Calculated and tabulated thresholds don't agree reaction label 8: e- + Pu3s1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5902.1 eV!

13. Calculated and tabulated thresholds don't agree reaction label 9: e- + Pu3p1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5548.5 eV!

- 14. Calculated and tabulated thresholds don't agree reaction label 10: e- + Pu3p3/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4549.9 eV!
- 15. Calculated and tabulated thresholds don't agree reaction label 11: e- + Pu3d3/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3977.8 eV!
- 16. Calculated and tabulated thresholds don't agree reaction label 12: e- + Pu3d5/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3776.9 eV!
- 17. Calculated and tabulated thresholds don't agree reaction label 13: e- + Pu4s1/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1533.7 eV!
- 18. Calculated and tabulated thresholds don't agree reaction label 14: e- + Pu4p1/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1370.5 eV!
- 19. Calculated and tabulated thresholds don't agree reaction label 15: e- + Pu4p3/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1106. eV!
- 20. Calculated and tabulated thresholds don't agree reaction label 16: e- + Pu4d3/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 842.55 eV!
- 21. Calculated and tabulated thresholds don't agree reaction label 17: e- + Pu4d5/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 794.17 eV!
- 22. Calculated and tabulated thresholds don't agree reaction label 18: e- + Pu4f5/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 446.08 eV!
- 23. Calculated and tabulated thresholds don't agree reaction label 19: e- + Pu4f7/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 433.09 eV!
- 24. Calculated and tabulated thresholds don't agree reaction label 20: e- + Pu5s1/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 346.64 eV!

- 25. Calculated and tabulated thresholds don't agree reaction label 21: e- + Pu5p1/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 281.33 eV!
- 26. Calculated and tabulated thresholds don't agree reaction label 22: e- + Pu5p3/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 216.42 eV!
- 27. Calculated and tabulated thresholds don't agree reaction label 23: e- + Pu5d3/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 119.5 eV!
- 28. Calculated and tabulated thresholds don't agree reaction label 24: e- + Pu5d5/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 109.85 eV!
- 29. Calculated and tabulated thresholds don't agree reaction label 25: e- + Pu5f5/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 7.4 eV!
- 30. Calculated and tabulated thresholds don't agree reaction label 26: e- + Pu5f7/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 6.25 eV!
- 31. Calculated and tabulated thresholds don't agree reaction label 27: e- + Pu6s1/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 53.12 eV!
- 32. Calculated and tabulated thresholds don't agree reaction label 28: e- + Pu6p1/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 33.92 eV!
- 33. Calculated and tabulated thresholds don't agree reaction label 29: e- + Pu6p3/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 23.42 eV!
- 34. Calculated and tabulated thresholds don't agree reaction label 30: e- + Pu7s1/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5.42 eV!
- 35. Calculated and tabulated thresholds don't agree summedReaction label 31: total / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1. eV!

36. Calculated and tabulated thresholds don't agree $summedReaction\ label\ 32:\ pair\ product\ /\ Cross\ section:\ (Error\ \#\ 0):\ Threshold\ mismatch$

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1.022e6 eV!

37. Calculated and tabulated thresholds don't agree $summedReaction\ label\ 33:\ photoelectric\ absorption\ /\ Cross\ section:\ (Error\ \#\ 0):\ Threshold\ mismatch$

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5.42 eV!

- xsectplotter Warnings:
 - 1. Encountered runtime warning in xsect plotter or Fudge or matplotlib $\it Error: Runtime Warning$

stderr while processing crossSection

/usr/local/lib/python2.7/site-packages/matplotlib-1.3.1-py2.7-linux-x86_64.egg/matplotlib/pyplot.py:412: Runtime ... [3 more lines]